UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,371	02/10/2004	Peter Carlin	MSFT-3028 / 307006.01	3190

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/776,371	CARLIN ET AL.
	Examiner	Art Unit	
	Jay A. Morrison	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 December 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-42</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-42</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413)
                                                    Paper No(s)/Mail Date. _____ .
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application
3)☐ Information Disclosure Statement(s) (PTO/SB/08)   6)☐ Other: _____.
     Paper No(s)/Mail Date _____ .

DETAILED ACTION

Remarks

1.   Claims 1-42 are pending.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

3.   Claim 1-2,4-6,8,15-16,18-20,22,29-30,32-34,36 are rejected under 35 U.S.C.

103(a) as being unpatentable over Rosenberg ('Bringing Java to the Enterprise: Oracle

on Its Java Server Strategy', Dave Rosenberg, IEEE Internet Computing, March-April

1998) in view of <u>Kennedy et al.</u> ('<u>Kennedy</u>' hereinafter) ("Design and implementation of

generics for the .NET Common language runtime", ACM SIGPLAN Notices archive,

Volume 36, Issue 5, May 2001, Pages 1-12, Year of Publication: 2001, ISSN:0362-

1340).

As per claim 1, <u>Rosenberg</u> teaches

A method for coordinating the operation of a database management system and

a common language runtime executing on a common server, said method comprising:

(see abstract and background)

receiving a request from the common language runtime for at least one system

resource via an application programming interface of the database management

system; (requests from Aurora to Oracle hosting environment for memory allocation or

low-level system operations, page 56, first column, bullet points)

interpreting said request to determine at least one action to be performed;

(requests from Aurora to Oracle hosting environment for memory allocation or low-level

system operations, page 56, first column, bullet points)

transmitting a request to the server via the database management system when

said at least one action requires communication with the common server; and (low-level

system operations, page 56, first column, bullet points; Aurora/Java integrated with

Oracle's server, page 55, first paragraph)

returning a response to the common language runtime via said application

programming interface of the database management system. (interface provides for

requests from Aurora, page 56, first column, Aurora Environment Interface)

Rosenberg does not explicitly indicate "wherein said common language runtime

can manage the execution of code written in a plurality of programming languages".

However, Kennedy discloses "wherein said common language runtime can

manage the execution of code written in a plurality of programming languages" (CLR

provides implementation and inter-operation of multiple source languages, abstract).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Rosenberg and Kennedy because using the steps of

"wherein said common language runtime can manage the execution of code written in a

plurality of programming languages" would have given those skilled in the art the tools

to improve the invention by allowing various code sources to be implemented in the

same environment. This gives the user the advantage of being able to choose a

language they are comfortable programming in from a group of languages available.

As per claim 2, Rosenberg teaches

said at least one system resource is a memory resource. (Memory Manager,

page 56, column 3, through page 57, column 1)

As per claim 4, Rosenberg teaches

said common language runtime requests a memory resource via the application

programming interface of the database management system, and the database

management system manages the request to allocate a block of physical memory

where, had the common language runtime requested said memory resource directly

from an associated operation system, the common language runtime would have been

allocated a block of virtual memory. (Memory Manager, page 56, column 3, through

page 57, column 1)

As per claim 5, Rosenberg teaches

said database management system requests an allocation of memory from an

associated operating system where said request is made on behalf of said common

language runtime. (Oracle Java server embedded into Oracle server architecture,

Aurora/Java: A Scalable Java Server, page 55, column 1)

As per claim 6, Rosenberg teaches

said at least one system resource is an execution of a first thread. (Aurora/Java:

A Scalable Java Server, page 55)

As per claim 8, Rosenberg teaches

said database management system requests an execution of a first thread from

an associated operating system where said request is made on behalf of said common

language runtime. (Aurora/Java: A Scalable Java Server, page 55)

As per claims 15-16,18-20,22

These claims are rejected on grounds corresponding to the arguments given

above for rejected claims 1-2,4-6,8, respectively, and are similarly rejected.

As per claims 29-30,32-34,36

These claims are rejected on grounds corresponding to the arguments given

above for rejected claims 1-2,4-6,8, respectively, and are similarly rejected.

4.   Claims 3,17,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rosenberg ('Bringing Java to the Enterprise: Oracle on Its Java Server Strategy', Dave

Rosenberg, IEEE Internet Computing, March-April 1998) in view of Kennedy et al.

('Kennedy' hereinafter) ("Design and implementation of generics for the .NET Common

language runtime", ACM SIGPLAN Notices archive, Volume 36, Issue 5, May 2001,

Pages 1-12, Year of Publication: 2001, ISSN:0362-1340) and further in view of Bugnion

et al. ('Bugnion' hereinafter) (Patent Number 6,944,699).

As per claim 3, Rosenberg teaches

said common language runtime requests a memory resource via the application

programming interface of the database management system, said database

management system coordinates the request with: at least one other request on a

memory management system for said database management system, and a current

state of memory on the database management system, to ensure the database

management system and the common language runtime. (Memory Manager, page 56,

column 3 through page 57, column 1)

Neither Rosenberg nor Kennedy explicitly indicate "use only physical memory to

execute said requests."

However, Bugnion discloses "use only physical memory to execute said

requests" (column 12, lines 41-51).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Rosenberg, Kennedy and Bugnion because using the

steps of "use only physical memory to execute said requests" would have given those

skilled in the art the tools to improve the invention by maximizing performance by using

the underlying hardware as much as possible. This gives the user the advantage of

faster execution of software.

As per claims 17 and 31,

These claims are rejected on grounds corresponding to the arguments given

above for rejected claim 3, respectively, and are similarly rejected.

5.   Claims 7,21,35 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rosenberg ('Bringing Java to the Enterprise: Oracle on Its Java Server Strategy', Dave

Rosenberg, IEEE Internet Computing, March-April 1998) in view of Kennedy et al.

('Kennedy' hereinafter) ("Design and implementation of generics for the .NET Common

language runtime", ACM SIGPLAN Notices archive, Volume 36, Issue 5, May 2001,

Pages 1-12, Year of Publication: 2001, ISSN:0362-1340) and further in view of

Lucovsky et al. ('Lucovsky' hereinafter) (Patent Number 6,223,207).

As per claim 7, Rosenberg teaches

said common language runtime requests an execution of a first thread via the

application programming interfaces of the database management system, and the

database management system manages the request to assign the first thread to a

processor, ... where, had the common language runtime requested said execution of

said first thread directly from an associated operation system, the first thread would

have been allocated to a processor preemptively and may not have been the only

thread executing on that processor. (Aurora/Java: A Scalable Java Server, pages 55-

56)

Neither Rosenberg nor Kennedy explicitly indicate "ensure the first thread is the

only thread executing on that processor, and execute the first thread non-preemptively."

However, Lucovsky discloses "ensure the first thread is the only thread executing

on that processor, and execute the first thread non-preemptively" (column 8, lines 37-

40).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Rosenberg, Kennedy and Lucovsky because using the

steps of "ensure the first thread is the only thread executing on that processor, and

execute the first thread non-preemptively" would have given those skilled in the art the

tools to improve the invention by reducing the overhead of a multi-threaded process.

This gives the user the advantage of better execution times.

As per claims 21 and 35,

These claims are rejected on grounds corresponding to the arguments given

above for rejected claim 7, respectively, and are similarly rejected.

6. Claims 9-10, 23-24 and 37-38 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rosenberg ('Bringing Java to the Enterprise: Oracle on Its Java

Server Strategy', Dave Rosenberg, IEEE Internet Computing, March-April 1998) in view

of Kennedy et al. ('Kennedy' hereinafter) ("Design and implementation of generics for

the .NET Common language runtime", ACM SIGPLAN Notices archive, Volume 36,

Issue 5, May 2001, Pages 1-12, Year of Publication: 2001, ISSN:0362-1340) and further

in view of Kumar et al. ('Kumar' hereinafter) (Patent Number 6,697,810).

As per claim 9, Rosenberg teaches

said at least one system resource. (Aurora/Java: A Scalable Java Server, pages

55-56)

Neither Rosenberg nor Kennedy explicitly indicate "is a secured data resource."

However, Kumar discloses "is a secured data resource" (column 7, lines 25-35).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Rosenberg, Kennedy and Kumar because using the

steps of "is a secured data resource" would have given those skilled in the art the tools

to improve the invention by having secure access to resources. This gives the user the

advantage of having assets protected.

As per claim 10, Rosenberg teaches

said common language runtime requests a ... via the application programming

interface of the database management system, and the database management system

manages the request. (Aurora/Java: A Scalable Java Server, pages 55-56)

Neither Rosenberg nor Kennedy explicitly indicate "secured data resource ... to

grant or deny access to said data resource based on a predefined criteria."

However, Kumar discloses "secured data resource ... to grant or deny access to

said data resource based on a predefined criteria" (column 7, lines 25-35).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Rosenberg, Kennedy and Kumar because using the

steps of "secured data resource ... to grant or deny access to said data resource based

on a predefined criteria" would have given those skilled in the art the tools to improve

the invention by having secure access to resources. This gives the user the advantage

of having assets protected.

As per claims 23-24 and 37-38,

These claims are rejected on grounds corresponding to the arguments given

above for rejected claims 9-10, respectively, and are similarly rejected.

7.   Claims 11-14, 25-28 and 39-42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rosenberg ('Bringing Java to the Enterprise: Oracle on Its Java

Server Strategy', Dave Rosenberg, IEEE Internet Computing, March-April 1998) in view

of Kennedy et al. ('Kennedy' hereinafter) ("Design and implementation of generics for

the .NET Common language runtime", ACM SIGPLAN Notices archive, Volume 36,

Issue 5, May 2001, Pages 1-12, Year of Publication: 2001, ISSN:0362-1340) and further

in view of Ng (Publication Number 2004/0225893).

As per claim 11, Rosenberg teaches

said database management system requests ... from an associated operating

system where said request is made on behalf of said common language runtime.

(Aurora/Java: A Scalable Java Server, pages 55-56)

Neither Rosenberg nor Kennedy explicitly indicate "a secured data resource".

However, Ng discloses "a secured data resource" (paragraph [0070]).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Rosenberg, Kennedy and Ng because using the steps

of "a secured data resource" would have given those skilled in the art the tools to

improve the invention by managing how privileges or permissions are granted. This

gives the user the advantage of having better security.

As per claim 12, <u>Rosenberg</u> teaches

said database management system providing the common language runtime.

(Aurora/Java: A Scalable Java Server, pages 55-56)

Neither <u>Rosenberg</u> nor <u>Kennedy</u> explicitly indicate "with a security policy that

governs: whether a set of resources can be accessed by an execution code running in

said common language runtime; and whether a set of operations can be performed by

said execution code running in said common language runtime."

However, <u>Ng</u> discloses "with a security policy that governs: whether a set of

resources can be accessed by an execution code running in said common language

runtime; and whether a set of operations can be performed by said execution code

running in said common language runtime" (paragraph [0070]).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine <u>Rosenberg</u>, <u>Kennedy</u> and <u>Ng</u> because using the steps

of "with a security policy that governs: whether a set of resources can be accessed by

an execution code running in said common language runtime; and whether a set of

operations can be performed by said execution code running in said common language

runtime" would have given those skilled in the art the tools to improve the invention by

managing how privileges or permissions are granted. This gives the user the advantage

of having better security.

As per claim 13,

Neither <u>Rosenberg</u> nor <u>Kennedy</u> explicitly indicate "said database management system enabling said execution code to specify a set of Code Access Security (CAS) permissions that are used by the database management system to: determine whether said execution code is permitted to access a specific resource outside of the control of the database management system; and specify whether said execution code is permitted to perform operations that are identified as potentially compromising a measurement of robustness of a process operating in said database management system."

However, <u>Ng</u> discloses "said database management system enabling said execution code to specify a set of Code Access Security (CAS) permissions that are used by the database management system to: determine whether said execution code is permitted to access a specific resource outside of the control of the database management system; and specify whether said execution code is permitted to perform operations that are identified as potentially compromising a measurement of robustness of a process operating in said database management system" (paragraph [0070]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine <u>Rosenberg</u>, <u>Kennedy</u> and <u>Ng</u> because using the steps of "said database management system enabling said execution code to specify a set of Code Access Security (CAS) permissions that are used by the database management system to: determine whether said execution code is permitted to access a specific

resource outside of the control of the database management system; and specify

whether said execution code is permitted to perform operations that are identified as

potentially compromising a measurement of robustness of a process operating in said

database management system" would have given those skilled in the art the tools to

improve the invention by managing how privileges or permissions are granted. This

gives the user the advantage of having better security.

As per claim 14,

Neither Rosenberg nor Kennedy explicitly indicate "setting up a security policy

that governs the common language runtime; and enforcing the set of Code Access

Security (CAS) permissions."

However, Ng discloses "setting up a security policy that governs the common

language runtime; and enforcing the set of Code Access Security (CAS) permissions"

(paragraph [0070]).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Rosenberg, Kennedy and Ng because using the steps

of "setting up a security policy that governs the common language runtime; and

enforcing the set of Code Access Security (CAS) permissions" would have given those

skilled in the art the tools to improve the invention by managing how privileges or

permissions are granted. This gives the user the advantage of having better security.

As per claims 25-28 and 39-42,

These claims are rejected on grounds corresponding to the arguments given

above for rejected claims 11-14, respectively, and are similarly rejected.

Response to Arguments

8.   Applicant's arguments with respect to claims 1-42 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

The prior art made of record, listed on form PTO-892, and not relied upon is

considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay A. Morrison whose telephone number is (571) 272-7112. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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